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Rapid Assessment of Community Health Worker Knowledge Compared with Knowledge of Doctors and Nurses June 2006

June 2006

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1. Background

United States Agency for International Development (USAID) funding through the Rural Expansion of Afghanistan's Community-based Healthcare (REACH) Program has supported the selection and training of 6036 Community Health Workers (3204 females and 2832 males). The CHW training includes three phases, and CHWs can start working after concluding Phase I; however, they do not acquire the full spectrum of skills, including treatment of pneumonia and malaria, until Phase III.

After final testing and fielding of the CHWs, the challenge remains to monitor their actual performance. According to the grants agreements signed with the non-governmental organizations (NGO) that are implementing the Basic Package of Health Services (BPHS) in 14 provinces of Afghanistan, regular supervision and monitoring is part of the NGO responsibility.

In addition, REACH performs independent monitoring of the working status of the CHWs. Taking advantage of the regular REACH monitoring schedule, a 10% sample of the 2571 CHWs who had completed the third phase of training by December 2005, and who were scheduled for monitoring in December 2005 and January 2006, was selected to be tested on their knowledge of how to manage the prime health conditions that are part of the CHW job description. Between December 2005 and March 2006, 295 CHWs were interviewed in 11 provinces. Of these, 292 interview records were retained for analysis.

In May 2006, a sample of 52 nurses and medical doctors, selected from among the 726 doctors and nurses posted in 6 provinces by NGO grantees, were asked to respond to the same questionnaires. The latter interviews were undertaken to provide a basis for comparing the results of the CHW knowledge assessment with the knowledge of other health workers on the same topics. Because of time and budget constraints, the selection of provinces was limited to those provinces initially visited for the CHW interviews that were also easily accessible from Kabul.

2. Assessment Tools

A questionnaire was developed containing six knowledge questions based on the standard CHW curriculum and training schedule; two questions referred to the main topics covered in each phase of training (see Annex 1). The questions were double checked with the CHW trainers for validity before the monitors began their training.

The CHWs were expected to give unprompted answers, but the questions could be asked in different ways as long as no hint was given as to the possible answers. Both the author of the questionnaire and the monitors who would administer it recognized that it is difficult to ask knowledge questions without probing. The translation and actual wording of the questions was therefore tested and edited during the training of the monitors.

At the suggestion of the monitors, the questionnaire also contained a quick guide to the correct answers so monitors could give immediate feedback to the interviewed CHWs.

3. Training of interviewers

The assessment took place during routine CHW monitoring visits, initially planned to take place between December 2005 and January 2006. Therefore, 28 REACH monitors were trained in the appropriate use of the questionnaires. Each question was analyzed and various ways to word the same question were evaluated for validity. Each question was then tested through role playing, during which the inter- and intra-surveyor reliability were also assessed. Originally planned to last one day, training was continued for a second day until the surveyors and the tool obtained three consecutive scores of at least 90% overall reliability for the six questions.

4. Sampling

The questionnaire was administered only to CHWs who had completed Phase III training because several key CHW activities are addressed only in Phase II and Phase III. Also, since CHWs start working after completing Phase I, those who completed Phase III would have had several months of actual experience that applied to questions addressing Phase I and Phase II topics.

The sampling of CHWs to be interviewed was random within each NGO grant: 10% of the CHWs who had completed Phase III by December 2005, and who were scheduled for monitoring in December 2005 and January 2006, were selected to answer the questionnaire. Sampling was performed by the Monitoring Supervisor in the REACH office in Kabul before monitors departed. Random numbers were obtained using the MS-Excel randbetween(x,y) function. A 100% replacement sample for each grant was defined at the same time in the event that an originally selected CHW should be absent on the day of the monitoring.

In May 2006, out of a total of 726 listed medical doctors and nurses in 6 provinces, a random sample of 50 was selected with a 100% replacement sample. The selection of provinces was limited to those provinces initially visited for the CHW interviews that were also easily accessible from Kabul. Security considerations made several of the selected individuals inaccessible to the monitors; about half of the doctors and nurses who were actually interviewed came from the replacement sample.

5. Implementation

Since the assessment questionnaire was applied during routine monitoring visits to a sample of all the CHWs already scheduled for these visits, no additional costs or logistics arrangements were involved in data collection from this group. Due to an unforeseen

interruption of monitoring visits in January-February, data collection, originally planned for December-January, was extended until March 2006.

In early June 2006, four of the initially trained monitors were redeployed to collect the data from the selected comparison sample of medical doctors and nurses. Security considerations in several provinces prohibited the monitors from interviewing several of the initially sampled individuals. These interviews were carried out with individuals from the replacement sample.

6. Analysis

Data from the questionnaires was entered into an MS-Access routine and analyzed using MS-Access queries and MS-Excel pivot tables. Answers were evaluated for degree correctness against the listings in the standard CHW Training Manual, assuming that all CHWs had been exposed to the content of the manual during their initial training.

The analysis was broken down by male and female CHWs, based on an assumption by some observers that females, by nature, would have a better understanding about counseling women on pregnancy-related matters and contraception. A break down by grant and by provinces was also assessed. However, the observations of differences between grants and provinces involve very small sub-samples and are thus, at best, indicative only of a possible need for further investigation. Those data are not presented in detail in this report.

The results of the comparison survey of doctors and nurses are used mainly for comparisons between the total results of CHWs and the total result of the doctor/nurse group.

While 295 CHWs were interviewed in 11 provinces, only 292 interviews were retained for analysis after processing of the data collection forms. The data collection forms of three CHWs were incomplete and were, therefore, excluded from the analysis. Of the retained 292 CHWs interviews, 53% were from female and 47% from male CHWs, which matches the general female/male proportion in the total CHW population. Figure 1 illustrates the distribution of the interviewed CHWs and Nurses/Doctors by gender and province.

Province	CHWs			Nurses and doctors		
	Female	Male	Total	Female	Male	Total
01:KABUL	6	3	9	2	8	10
06:GHAZNI	24	24	48	2	7	9
07:PAKTYA	22	19	41	7	8	15
11:BADAKHSHAN	3	2	5			
13:BAGHLAN	5	5	10	2	3	5
17:JAWZJAN	8	2	10			
18:FARYAB	10	4	14			
20:HIRAT	60	57	117			
28:BAMYAN	8	2	10	1	7	8
29:PAKTIKA	7	12	19			
32:KHOST	2	7	9		5	5
Grand Total	155	137	292	14	38	52

Figure 1 – Interviews by Province

CHWs and Nurses/Doctors were selected from 21 grants. Figure 2 illustrates the distribution of the interviewed CHWs and Nurses/Doctors by gender and BPHS grant code. Thirteen CHWs were assigned to be supervised by two facilities that were not included in a BPHS grant; for those facilities, the grant code shows up as “None”

	CHWs			Nurses and doctors		
	Female	Male	Total	Female	Male	Total
BP-01-01					5	5
BP-01-03	5	5	10		4	4
BP-01-04				1	5	6
BP-01-06	20	18	38			
BP-01-07	2	3	5			
BP-01-08	22	19	41	7	8	15
BP-01-09	2	7	9		5	5
BP-01-10				1		1
BP-01-11	8	2	10	1	2	3
BP-01-13	14	10	24			
BP-01-15	14	12	26	2	2	4
BP-01-16	8	6	14			
BP-02-01	14	14	28			
BP-02-02	6	3	9		3	3
BP-02-03	5	5	10	2	3	5
BP-02-04	8	2	10			
BP-02-07	8	1	9			
BP-02-10	3	2	5			
BP-02-11	7	12	19			
BP-03-03	5	7	12		1	1
None	4	9	13			
Grand total	155	137	292	14	38	52

Figure 2 – Interviews by Grant

7. Results

Annex 3 provides the detailed answers given by CHWs and Nurses/Doctors to each question. Numbers and percentages of the results as analyzed are given in Annex 2. Please note that the questions below, in English, are direct translations of the Dari rather than polished, edited English.

Question 1: How do you explain to a mother how to prepare a packet of ORS powder?

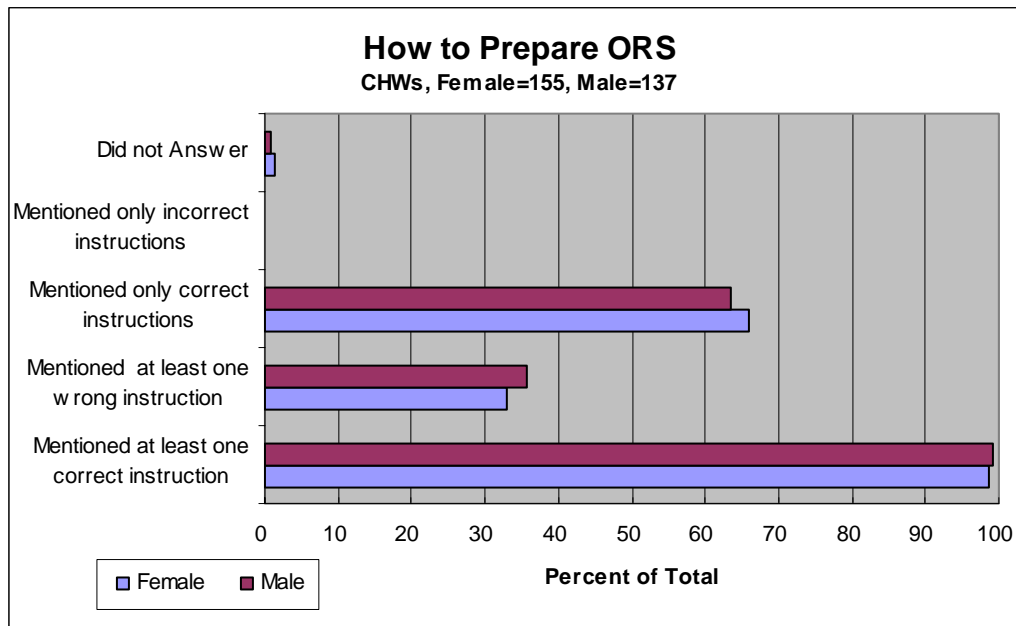


Figure 3 – CHW answers on preparation of ORS

When asked how they would explain to a mother how to prepare rehydration fluid with a packet of oral rehydration salts (ORS), almost all CHWs (99%) gave at least one correct instruction; however, only 65% mentioned a correct instruction without also mentioning an incorrect instruction, which matches the 34% that gave at least one incorrect instruction. None gave only incorrect instructions. About 1% did not answer the question.

There are no remarkable differences between males and females. Slightly more females than males mentioned only correct instructions (65% vs. 63%) and slightly fewer females than males (33% vs 36%) gave at least one wrong instruction.

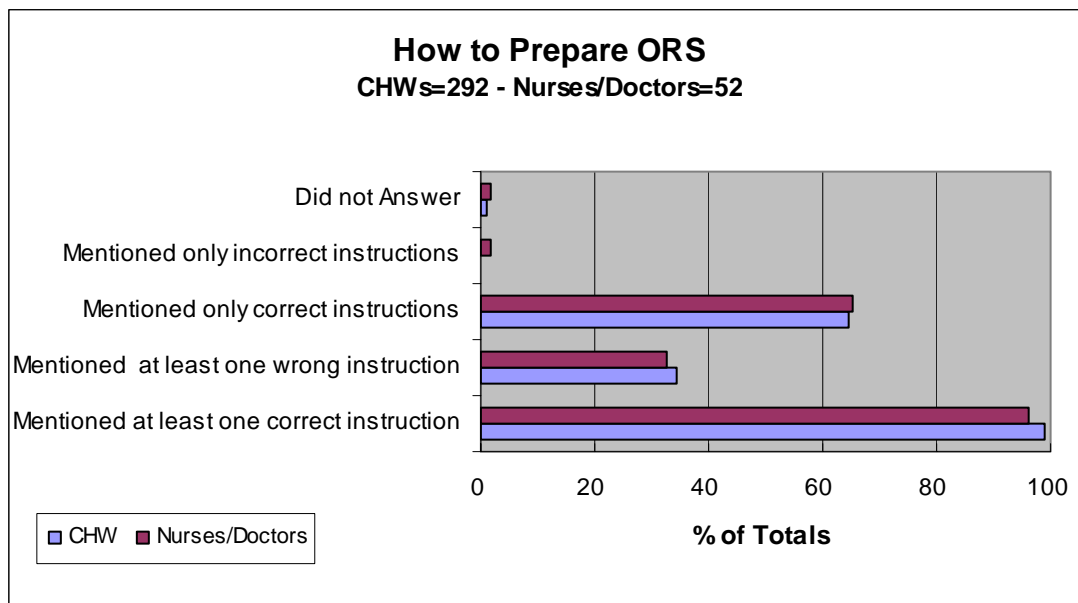


Figure 4 – Comparison of Nurses/Doctors and CHWs for preparation of ORS.

There is no remarkable difference between CHWs and Nurses/Doctors for this topic.

Question 2: What do you tell a mother to give to a 1.5 year old with watery diarrhea without dehydration?

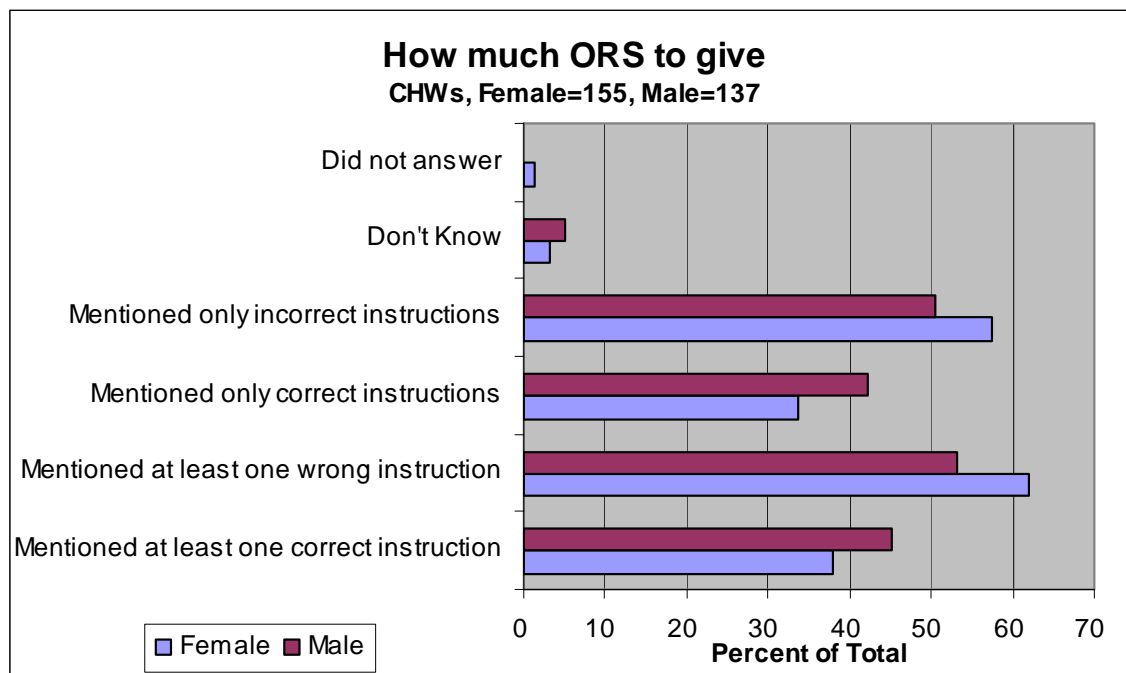


Figure 5 – CHW answers on administration of ORS

Less than half the CHWs (41%) mentioned at least one correct instruction, and slightly less (38%) mentioned a correct instruction without also mentioning an incorrect instruction. More than half (58%) mentioned at least one incorrect instruction or mentioned only incorrect instructions (54%); a few (4%) claimed not to know what instructions to give or did not answer (1%).

Females more frequently than males mentioned at least one incorrect instruction (62% vs. 53%) or only incorrect instructions (57% vs 50%).

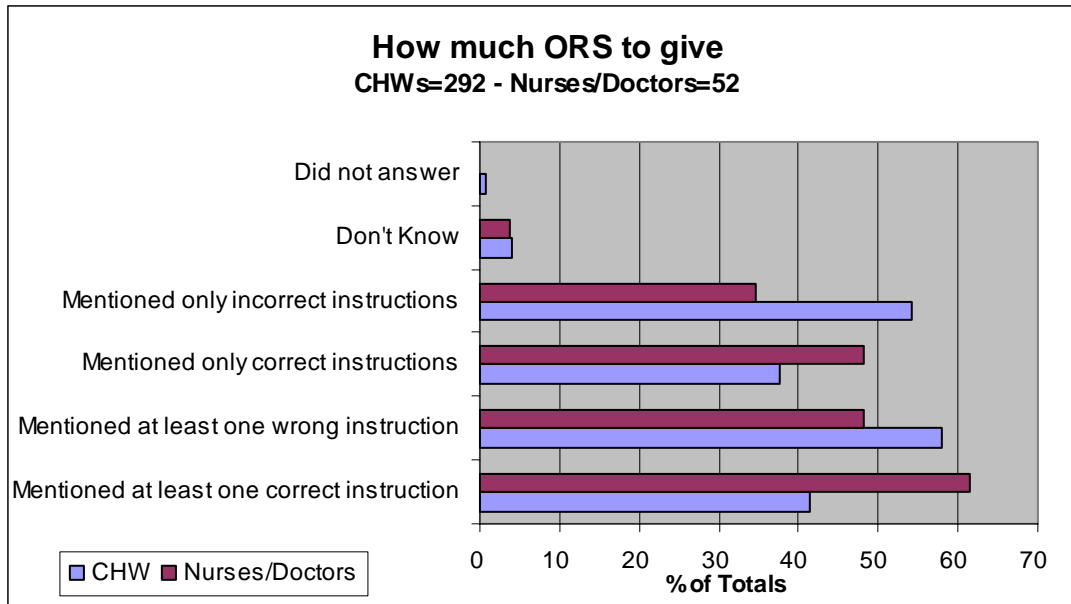


Figure 6 – Comparing CHWs and Nurses/Doctors on administration of ORS

Almost two thirds (62%) of the Nurses/Doctors group mentioned at least one correct instruction, and almost half (48%) mentioned at least one incorrect instruction. Although less than half (48%) mentioned only correct instructions, Nurse/Doctors seemed to do somewhat better than CHWs in remembering the right instructions for administering ORS.

Question 3: What general advice do you give to a pregnant woman who does not have any specific problems?

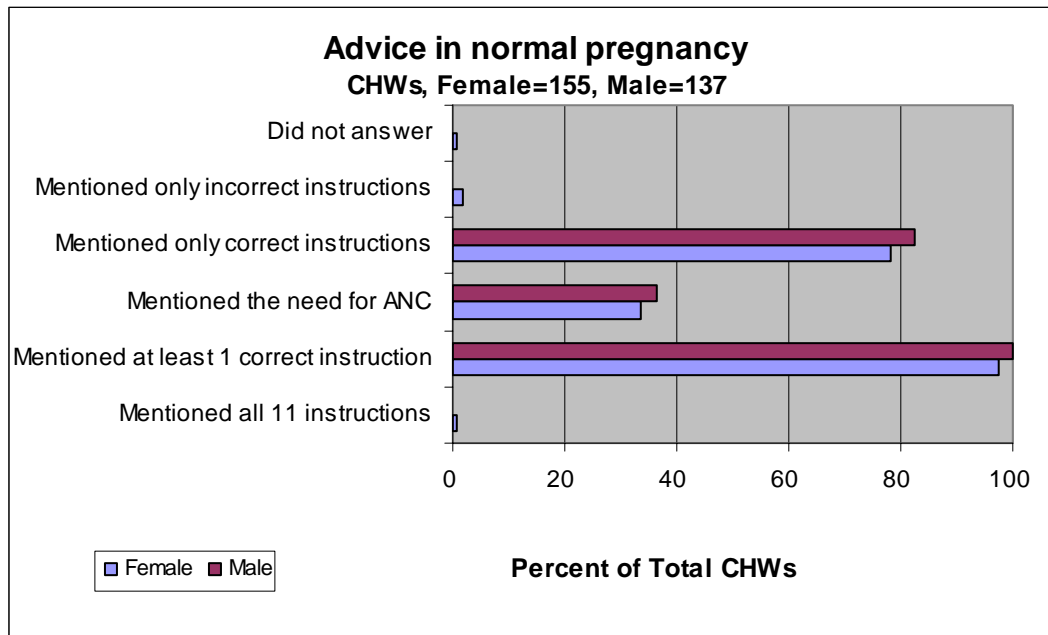


Figure 7 – CHW answers about advice to give to pregnant women

Of the 11 topics of advice about care during normal pregnancy, only one female CHW correctly mentioned all 11. On average, CHWs mentioned 3.4 topics (female CHWs 3.7 and male CHWs 3.4). Almost all CHWs (99%) mentioned at least one correct instruction, and the large majority mentioned only correct instructions (80%). However, only 35% mentioned the need for the women to consult a health worker who is skilled in antenatal care. One fifth (20%) also gave some other advice that was not included in the curriculum. Very few CHWs (1%) gave only incorrect instructions.

There seem to be no remarkable differences between male and female CHWs in retention of knowledge about appropriate care during pregnancy. A slightly higher proportion of male CHWs than female CHWs gave at least one correct instruction (100% vs 97%) or mentioned the need for ANC (37% vs. 34%). More female CHWs (21%) than male CHWs (18%) gave additional advice that is not included in the curriculum.

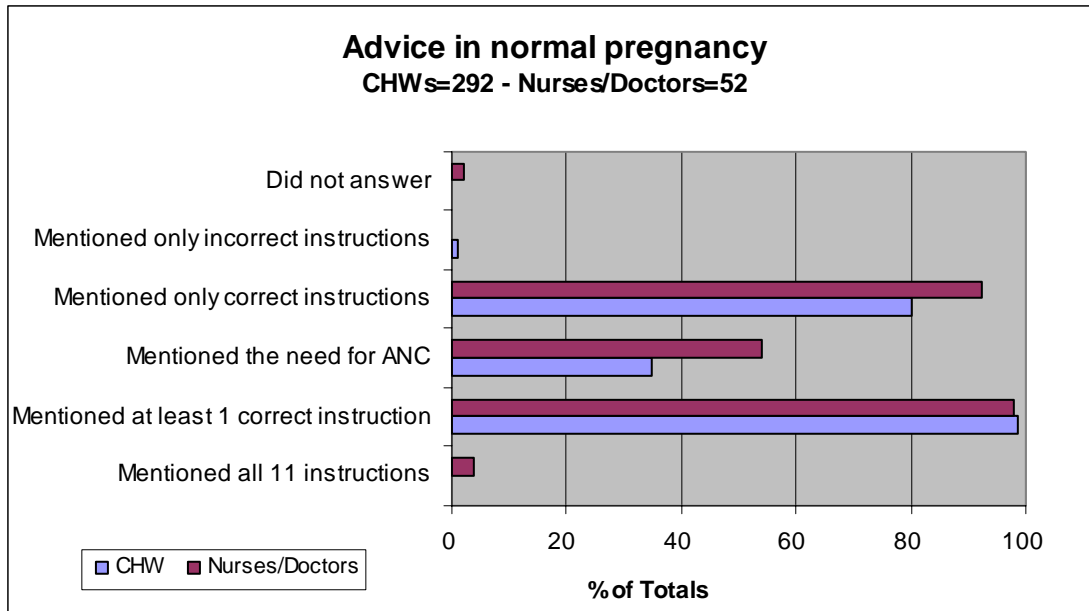


Figure 8 – Comparing CHWs and Nurses/Doctors on advice to give to pregnant women

Two male Nurses/Doctors mentioned all eleven instructions. Almost all of the Nurse/Doctor (98%) group mentioned at least one correct instruction. Nurses/Doctors seemed to remember better what to tell pregnant women than did CHWs: the average number of correct instructions is higher (4.5 vs 3.5), they more frequently mentioned only correct instructions (92% vs 80%), and they more often mentioned the need for an ANC visit with a skilled provider (54% vs 35%).

Question 4: What advice do you give to a woman who forgot to take one contraceptive pill in order to preserve the protection?

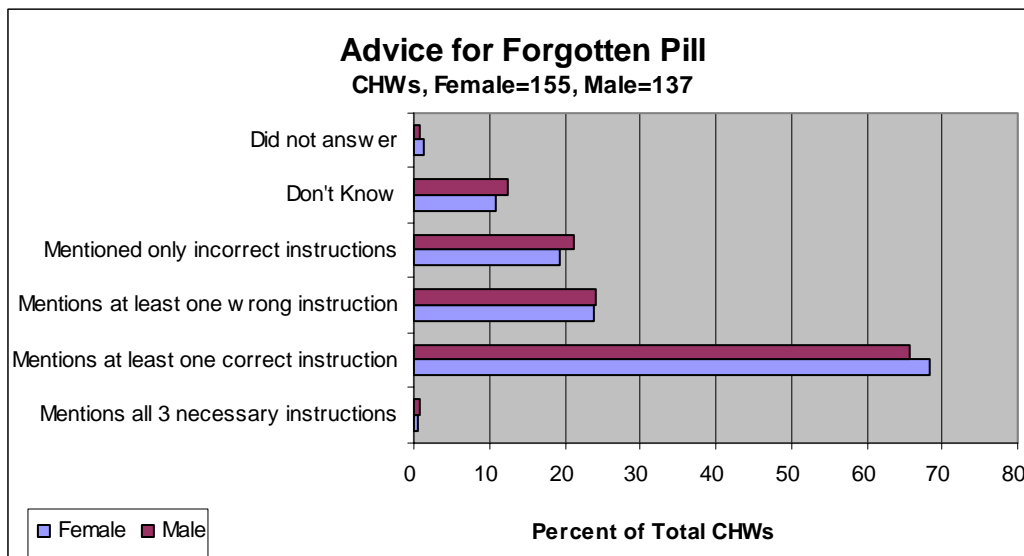
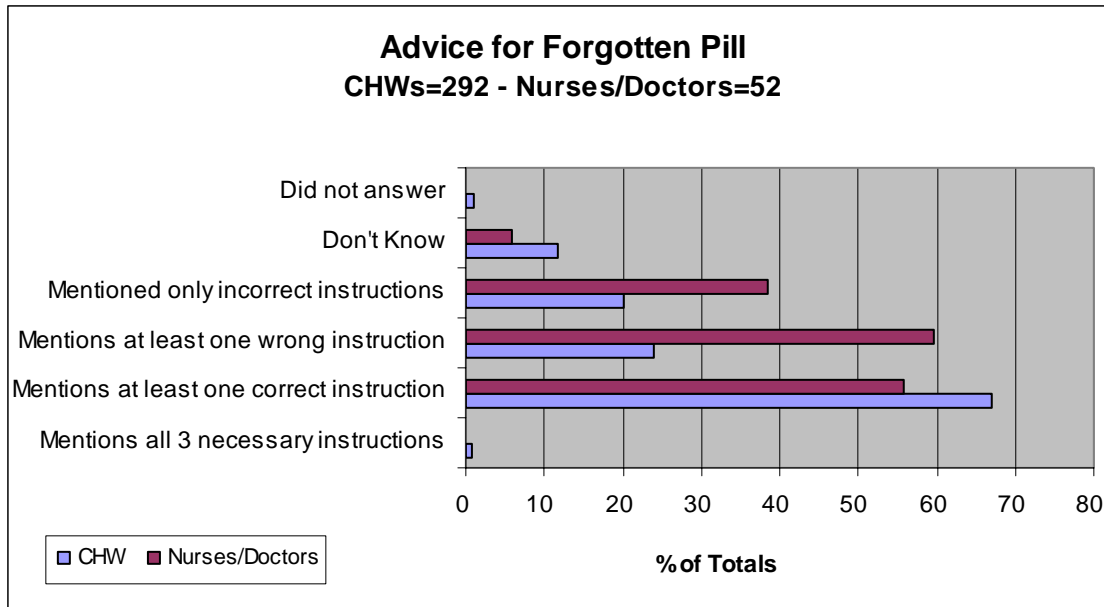


Figure 9 – CHWs answers about advice to give if a contraceptive pill is forgotten

Only two CHWs (one male and one female) mentioned the three key messages to give to a woman who forgot to take a contraceptive pill. A majority of the CHWs (67%) mentioned at least one correct instruction and one fourth (24%) mentioned at least one incorrect instruction. On average, CHWs mentioned 0.7 correct instructions out of 3, with 12% claiming they did not know what advice to give.

There is no remarkable difference between male and female CHWs. A slightly greater proportion of female CHWs than male CHWs gave at least one correct response (68% vs. 66%). The most frequently mentioned advice was to “take the pill immediately when she remembers” (53% of female CHWs and 50% of male CHWs). Barely 5% of all CHWs mentioned that women should use a barrier method or practice abstinence in addition to taking the pill until the next seven pills are taken.



**Figure 10 – Comparing CHWs and Nurses/Doctors
on advice to give if a contraceptive pill is forgotten**

None of the Nurse/Doctor group mentioned all three correct instructions. More than one third (39%) mentioned only incorrect instructions, almost twice as many as did the CHWs (20%). Nurses/Doctors mentioned at least one incorrect instruction more frequently than did CHWs (60% vs 24%) and mentioned at least one correct instruction less frequently (56% vs 67%). Only 8% mentioned that woman should take the next pill at the usual time, and 17% mentioned that the woman should use a barrier method or practice abstinence in addition to taking the pill until the next seven pills are taken.

Question 5: For what diseases do you give cotrimoxazole to sick children?

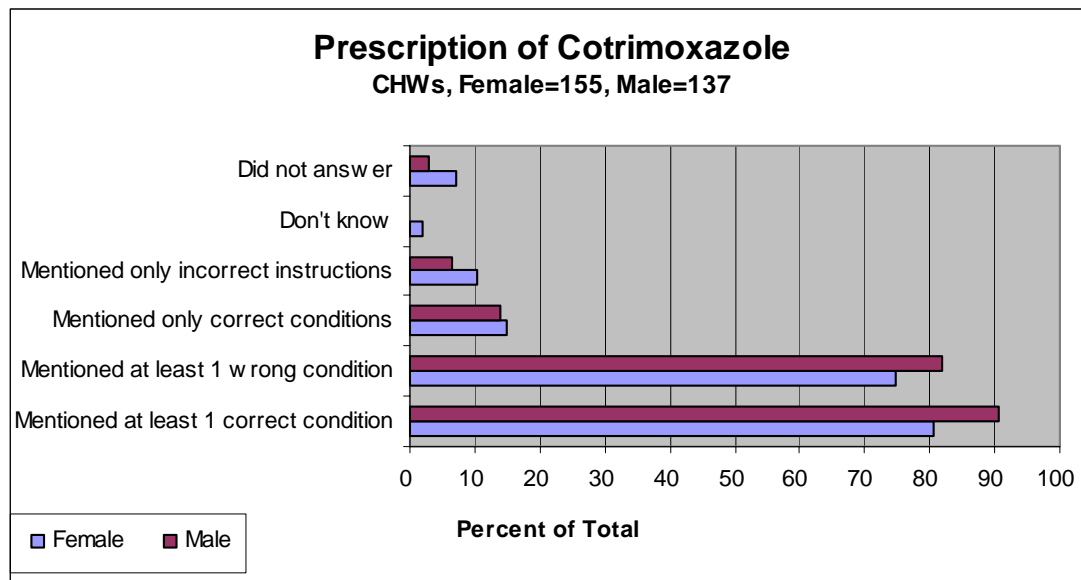
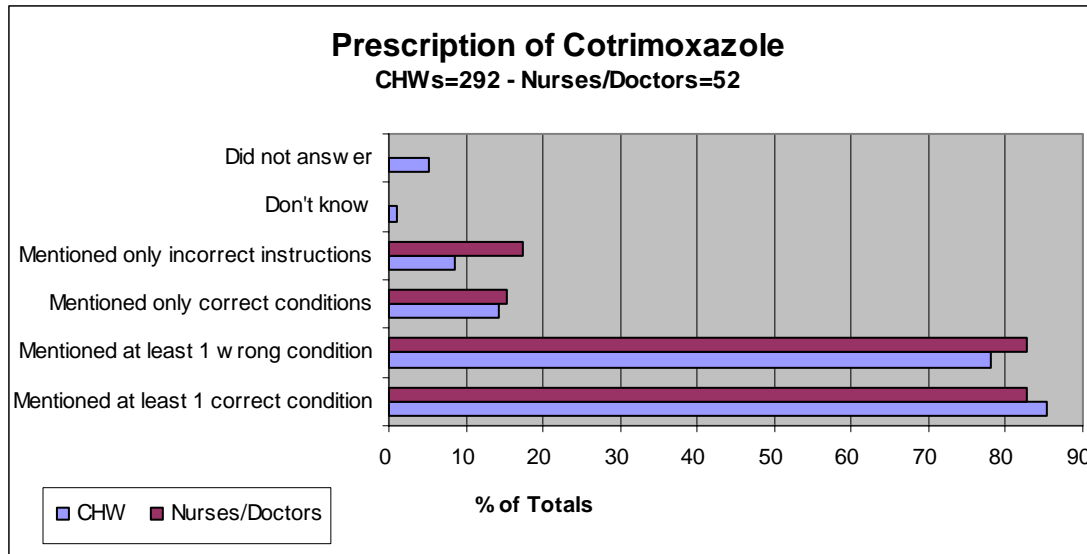


Figure 11 – CHWs answers about advice on prescription of Cotrimoxazole

The large majority of CHWs (85%) mentioned at least one of the conditions in children that needs to be treated with cotrimoxazole as a first line drug, mostly pneumonia (77%). About as many (78%) mentioned they would use cotrimoxazole for at least one condition that does not qualify for treatment with cotrimoxazole. Only 14% mentioned only conditions that qualify for treatment with cotrimoxazole. On average, CHWs mentioned 1.2 correct conditions. About 6% either claimed not to know what conditions this drug is used for or did not answer this question at all.

A lower proportion of female than male CHWs gave at least one correct answer (81% vs. 89%) or gave an incorrect answer (75% vs. 82%), and a greater proportion of female than male CHWs either claimed not to know what to say or did not answer the question at all (9% vs. 2%).



**Figure 12 – Comparing CHWs and Nurses/Doctors answers
about advice on prescription of Cotrimoxazole**

There is no remarkable difference between the Nurses/Doctors and CHW groups in response to the prescription of cotrimoxazole question. On average, both mentioned about 1.2 of the four conditions. CHWs mentioned at least one correct condition slightly more often (85% vs 83%) and at least one incorrect condition slightly less often (14% vs 15%). The Nurses/Doctors respondents mentioned only incorrect conditions twice as often (17% vs 9%) than CHWs, which may indicate a stronger tendency to over-prescribe this antibiotic.

Question 6: How many tablets of chloroquine a day do you give to a 2 year old with suspected malaria?

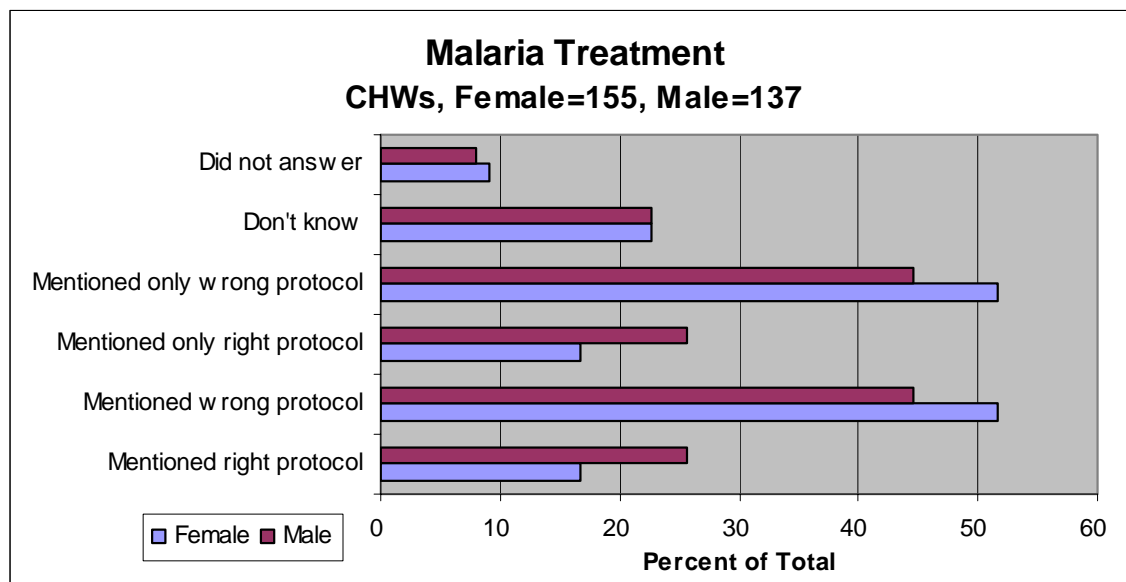


Figure 13 – CHWs answers on malaria treatment

Only 21% of the CHWs mentioned the correct protocol and 48% mentioned an incorrect protocol. All CHWs mentioning the right protocol mentioned no incorrect protocol. The most common mistake of the 48% who mentioned only wrong protocols was to slightly overdose the third day of treatment (13%). Almost one third (31%) of the CHWs claimed not to know the answer or did not answer the question.

Female CHWs gave the correct protocol less frequently than did male CHWs and gave an incorrect protocol more frequently than did males.

A smaller proportion of female than male CHWs mentioned the correct malaria treatment protocol (17% vs. 26%). A greater proportion of female CHWs than male CHWs mentioned a wrong malaria treatment protocol (52% vs. 45%). About the same proportion of female and male CHWs claimed not to know or did not answer the question at all (32% vs. 31%).

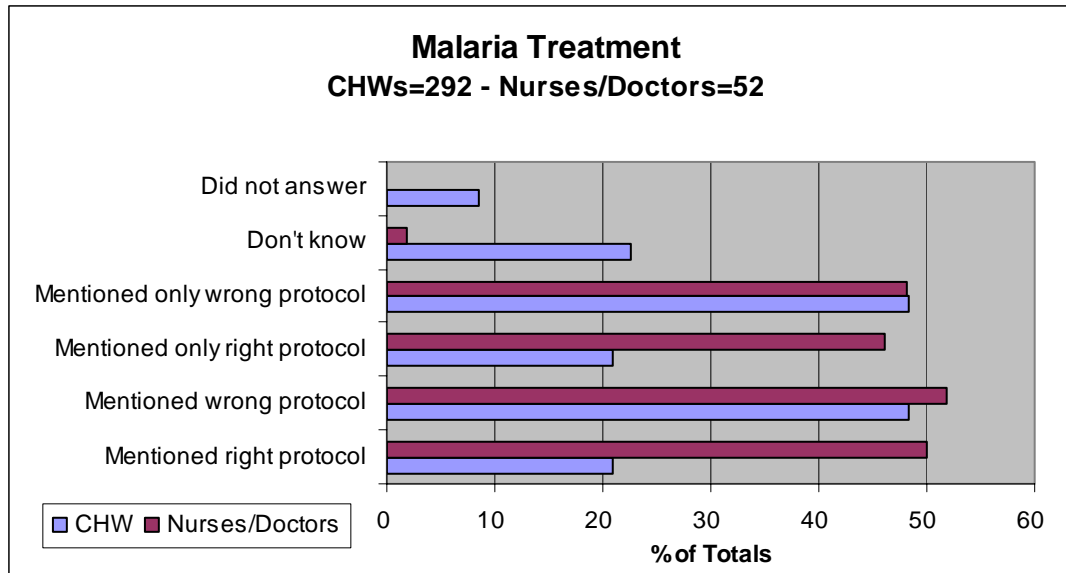


Figure 14 – Comparing CHWs and Nurses/Doctors answers on malaria treatment

The Nurses/Doctors group mentioned the correct protocol more than twice as frequently as CHWs (50% vs 21%). However, more than half of the former group mentioned a wrong protocol (52%). Unlike CHWs, some of the Nurses/Doctors that mentioned the right protocol also mentioned a wrong protocol (4%). Few claimed not to know the answer (2%).

8. Discussion

These results are not necessarily representative for all the CHWs since only those who met both criteria of having finished Phase III of the training by December 2005 (2571 of a total of 5508 active) and who were scheduled for a monitoring visit during the December 2005 and January 2006 were included in the sampling frame.

When presented with a child with diarrhea, one third of the CHWs do not know how to correctly explain the preparation of a packet of ORS (they give either incorrect advice only or mix correct advice with incorrect advice) and less than half know how to correctly instruct the mother to administer ORS to a non-dehydrated child with watery diarrhea.

On average, the CHWs give less than half of the advice they were taught to give to a pregnant woman who does not have any complaints. Although almost all CHWs gave at least one piece of sound advice, only a third would advise the pregnant women to have a prenatal visit with a skilled health worker.

When faced with a woman who forgot to take one contraceptive pill and who wants advice on how to protect herself, virtually none of the CHWs know the full advice to give. Slightly more than two thirds give at least one piece of correct advice, but that alone will not be sufficient to ensure the woman is protected for the rest of the cycle. Female CHWs seem slightly more knowledgeable on this topic than do male CHWs.

While three-quarters of the CHWs correctly mention pneumonia, bloody diarrhea, or skin infections as a condition for which to give cotrimoxazole, more than two thirds would also give cotrimoxazole for conditions that do not require it. This could lead to over-prescribing of cotrimoxazole and the possibility of cotrimoxazole-resistant strains of microbes in the long run.

Exact dosage of medication for the treatment for malaria in a child was cited by only one-fifth of the CHWs, while half mentioned an incorrect protocol; almost one third claimed not to know the answer or did not answer at all.

It should be noted that malaria questions are tricky because not all CHWs live and work in areas where malaria is endemic or epidemic so it is possible that many have not seen a single case of malaria after finishing Phase III training. In addition, the treatment of malaria is rather complex, since dosage varies with age and over the course of treatment.

For all the questions, large differences in the proportion of CHWs that gave “right” or “wrong” answers seem to exist between BPHS grants and provinces. This may indicate differences in the quality of CHW training. However, a larger sample would be needed to evaluate these differences for significance.

The differences between male and female CHWs are small. The results may give the impression that female CHWs are less apt to assimilate the initial training, in particular when it comes to the adequate use of drugs. The present analysis did not look into the overall education level of male and female CHWs. The general assumption is that female CHWs have had less formal education than the male CHWs (further analysis may confirm or contradict this assumption). If that is the case, and if CHW training is conducted in a school-room setting, female CHWs may be less apt to assimilate knowledge in that particular setting.

When comparing the CHWs' knowledge with that of the interviewed Nurses and Doctors, some differences should be noted. In particular, when it comes to administering ORS and chloroquine, a higher proportion of the Nurses/Doctors group gave the correct instructions. However, there is no difference in knowledge on administering cotrimoxazole, and a higher proportion of the CHW group gave the right advice in regard to contraception. Overall, the differences between CHWs and other health workers are not that dramatic.

9. Conclusions and recommendations

The questions address topics that have been part of CHW curricula in Afghanistan for quite some time (diarrhea treatment, advice to pregnant women) as well as topics that were less commonly included in earlier CHW training but which are included in the new standard curriculum based on the BPHS (family planning, treatment of ARI and malaria). The results for the first three topics are reasonably acceptable; the results for the latter three topics give reason for concern: CHW knowledge of family planning and treatment of ARI and malaria is insufficient.

When comparing results for the CHWs with results for the Nurses/Doctors group, one cannot conclude that CHWs are consistently doing worse than are the other health workers. Differences are not enormous, and seem to go both ways (CHWs demonstrating less knowledge about malaria treatment and completeness of instructions for administering ORS, but doing better on contraceptive advice). At least for the tested topics, CHWs seem to be a reasonable alternative to nurses or medical doctors in areas where access to the latter is difficult.

Recommended actions:

1. **Evaluate the knowledge of trainers on the “newer” topics.** Since the Basic Package of Health Services (BPHS) has been introduced only relatively recently, it may be that trainers lack familiarity with the BPHS and its recommendations, which in turn makes it difficult for them to transmit the right knowledge to the CHWs. It may also be that trainers have residual resistance to some of the recommendations in the BPHS, for example, having CHWs actually treat some of the most common childhood diseases or distribute contraceptives which, in turn, may influence their teaching on these subjects.
2. **The effectiveness (degree of successful knowledge transfer) of the teaching methods of the different grantee trainings should be evaluated and corrected where necessary.** The content of the Training Manual for CHWs correctly reflects the BPHS recommendations and served as basis for the questions in this survey and as reference for the “correct” answers. However, the lack of knowledge on the most recently taught (Phase III) topics (cotrimoxazole and malaria), which should be most fresh in the CHWs’ memories, may indicate that the teaching method used is not very effective, in particular for female CHWs.
3. **Schedule regular supervisory visits and refresher training modules in case management.** The incomplete recollection of diarrhea treatment (taught in Phase I) most likely indicates lack of supportive supervision and lack of refresher training. No matter what level of health worker we address, only repetition allows mastering the skills for accurate case management. While we did not have information about which CHWs had undergone refresher training following their initial training, it is most likely that none had received this training. It is highly recommended that planned

future CHW training initiatives should, from their inception, include a regular refresher training schedule for all initially trained CHWs. Likewise, nurses and medical doctors may profit from refresher training in most of the topics investigated.

Annex 1 – Questionnaire and data collection guide

Province:	District:	NGO:	CHW name:	CHW ID:	HF	1. :
1. How do you explain to the mother how to prepare ORS? How do you explain to the mother how to prepare the solution from a packet of ORS powder? <i>(Mark all the CHW mentions)</i>			2. چگونه طرز تهیه ORS را به مادر بیان میدارید؟ چگونه طرز تهیه محلول را از یک پاکت ORS برای مادر بیان میدارید؟ (کلیه اظهارات CHW را تیک مارک بزنید)			
a. Mix one packet with one liter of clean water b. Mix one packet with 4 glasses of clean water c. Use clean drinking water d. Use clean water e. Mix one packet with one liter of light green tea f. Mix one packet with 4 glasses of light green tea g. Use freshly made light green tea h. Use light green tea i. None of the above			a. یک پاکت را با یک لیتر آب پاک مخلوط کنید b. یک پاکت را با 4 گیلان آب پاک مخلوط کنید c. از آب نوشیدنی پاک استفاده نکنید d. از آب نوشیدنی استفاده شود. e. یک پاکت را در یک لیتر چای سبز رقیق مخلوط کنید f. یک پاکت را در 4 گیلان چای سبز رقیق مخلوط کنید g. از چای سبز رقیق تازه دم شده استفاده نکنید h. از چای سبز رقیق استفاده نکنید i. هیچ از نکات فوق			
2. What do you tell the mother to explain how much fluid to give to a 1.5 year old with diarrhea without dehydration? <i>(Mark only one)</i>			2. برای تشریح اینکه چه مقدار مایعات را مادر باید به یک طفل یک و نیم ساله مصاب به اسهال بدون دیهدریش بدهد، شما برای مادران چی توصیه میکنید؟ (یکی آنرا تیک بزنید)			
a. Give one liter a day b. Give one spoonful every 5 or 10 minutes c. Give ½ cup every 30 minutes d. Give ½ cup after every watery stool e. Give 1 cup after every watery stool f. Give a bottle a day g. Other h. Don't know			a. روزانه یک لیتر b. هر پنج یا 10 دقیقه بعد، یک قاشق c. هر 30 دقیقه بعد، نیم پیاله d. بعد از هر تغوط آبگین، نیم پیاله e. بعد از هر تغوط آبگین، یک پیاله f. روزانه یک بوتل g. و غیره h. نمی فهمم			
3. What advice do you give to any woman who is pregnant without any problems? <i>(Mark all the CHW mentions)</i>			3. برای آنده خانم های حامله که هیچ تکلیف ندارند چی توصیه مینمائید؟ (اظهارات CHW را تیک بزنید)			
a. Eat enough good foods b. Take extra iron and folic acid c. Take extra vitamins d. Use iodized salt e. Sleep and rest when you can f. Take some physical exercise, walk around regularly g. Keep clean h. Avoid traditional and modern medicines, except when prescribed i. Go to antenatal visit by a midwife or MD j. Get tetanus injection k. Avoid tobacco, opium, and other drugs l. Others m. Don't know			a. غذای خوب بقدر کافی بخورید b. آهن و فولیک اسید اضافی بگیرید c. ویتامین های اضافی بگیرید d. از نمک آیودین دار استفاده نمائید e. اگر میتوانید، خواب و استراحت نمائید f. تمرین فیزیکی نمائید و بطور منظم قدم بزنید g. خود را پاک نگهدارید h. از استعمال ادویه های عنعنوی و جدید بپرهیزید، بجز در صورت هدایت پزشک i. برای معاینه قبل از ولادت به قابله یا متخصص مراجعه نمائید j. واکسین تیتانوس را تطبیق نمائید k. از استعمال تنباکو، تریاک و غیره مخدرات جلوگیری نمائید l. و غیره m. نمی دانم			

<p>4. Do you distribute contraceptive tablets? IF YES: A woman asks you what to do if she forgets one (1) pill. What do you tell this woman to do? <i>(Mark all the CHW mentions)</i></p> <ul style="list-style-type: none"> a. Take the pill immediately when she remembers b. Take the next pill at the usual time c. Use condoms or abstain from intercourse until 7 pills have been taken consecutively d. Skip the forgotten pill and continue the other pills e. Each day of forgetting a pill increases risk of pregnancy f. Other g. Don't know 	<p>4. آیا تابلیت های ضد حاملگی را توزیع مینمایید؟ اگر بلی: در صورتی که کدام خانم یکی از تابلیت هایش را فراموش کرده باشد از شما می پرسد که چه باید کرد. پس در این رابطه به خانم چه توصیه مینمایید؟ (تمام نکات را که CHW ذکر مینمایند نشانی نمایید)</p> <ul style="list-style-type: none"> a. فوراً بعد از یادوری وی تابلیت را برایش میدهد b. تابلیت بعدی را در وقت معینه آن توصیه مینمایید c. کاربرد کاندوم و یا خود داری نمودن از مجامعت جنسی الی زمانیکه 7 تابلیت بصورت مسلسل اخذ نگردیده باشد توصیه میدارید d. تابلیت فراموش شده را بجا گذاشته و اخذ تابلیت های دیگر را توصیه مینمایید e. هر روزیکه فراموش شود خطر حمل گرفتن افزایش میابد f. و غیره g. نمی دانم
<p>5. For what diseases do you give cotrimoxazole to children? For which diseases will you give cotrimoxazole tablets to a child? For what purpose do you use cotrimoxazole? When do you give cotrimoxazole to sick children? <i>(Mark all the CHW mentions)</i></p> <ul style="list-style-type: none"> a. Respiratory infection b. Cough c. Headache d. Pneumonia e. Diarrhea f. Diarrhea with blood g. Skin infections h. Fast breathing i. Others j. Never k. Don't know 	<p>5. در کدام امراض کوتری موکسازول را به اطفال توصیه مینمایید؟ برای کدام امراض تابلیت کوتری موکسازول را به طفل توصیه خواهید نمود؟ به چه هدف کوتری موکسازول را توصیه مینمایید؟ چه وقت کوتری موکسازول را به طفل مریض توصیه مینمایید؟ (تمام نکات را که CHW ذکر مینمایند نشانی نمایید)</p> <ul style="list-style-type: none"> a. انتانات تنفسی b. سرفه c. سردردی d. سینه یغل e. اسهال f. اسهال همراه خون g. انتانات جلدی h. تنفس زود زود i. غیره موارد j. هیچ وقت k. نمی دانم
<p>6. If a child of 2 years has malaria/fever, how many tablets a day of chloroquine will you tell the mother to give and for how many days? <i>(Mark only one)</i></p> <ul style="list-style-type: none"> a. 1 per day for 2 days b. 2 per day for 2 days c. 1 per day for 3 days d. 2 per day for 3 day e. 1 per day for 2 days, and ½ the third day f. 2 per day for 2 days and 1 the third day g. Other h. Don't know 	<p>6. اگر یک طفل 2 ساله ملاریا/ تب داشته باشد مادر را توصیه مینمایید که چند تابلیت کلوروکین را روزانه و برای چند روز آنرا به طفلش بدهد؟ (صرف یکی آنرا نشانی نمایید)</p> <ul style="list-style-type: none"> a. روزانه یک تابلیت برای دوروز b. روزانه دو تابلیت برای دوروز c. روزانه یک تابلیت برای سه روز d. روزانه دو تابلیت برای سه روز e. روزانه یک تابلیت برای دوروز، و نیم تابلیت در روز سوم f. روزانه دو تابلیت برای دوروز و یک تابلیت در روز سوم g. غیره h. نمی دانم

CHW Knowledge Questionnaire for Monitors – User’s Guide

1. Selection of CHWs

Before leaving Kabul, Mr. Hofiani will select randomly¹ the CHWs to be interviewed. On average 10% of all CHWs will be interviewed, about 2 per facility. Only CHWs having terminated 3rd phase will be interviewed.

You will get a list of names of CHWs to be interviewed (5 to 6) of these you go to the first 2. If both have finished third phase, interview them and go to the next facility. If one of the selected CHWs is not 3rd phase, go to number 3, then 4, then 5 until you have interviewed 2.

2. Interview CHWs

After finishing the general monitoring form, tell the CHW you want to ask some questions regarding the things (s)he learned in the CHW course.

Fill in the identification information on the top of the form.

The questions are suggested questions – you can read them as they are, but most likely you will have to adapt them to make sure that the CHW understands the question. However, avoid suggesting or prompting. There are some key elements in each question that have to be transmitted to the CHW before (s)he can answer the question.

Pay special attention to listen carefully and mark exactly what the CHW mentions. The most common mistake in this type of interview is to mark what you think should be the right answer.

Question 1: how does CHW explain to mother to prepare ORS

Make sure the CHW understands ORS and is familiar with it, before asking how to prepare it. In this question you mark all the listed answers that are given by the CHW. Anything that is mentioned and not listed goes under “None of the above”.

Question 2: how does CHW explain to mother how much fluid to give

Make sure the CHW understands this is a 1.5 year (18 months) old child, with diarrhea, but without dehydration. Should the CHW give more than one answer, mark only the first one given. Any answer that does not correspond with the listed options should be marked as “Other”. If the CHW does not give any informative answer, but claims not to know the answer, mark “Don’t Know”

Question 3: what general advice does the CHW give to a pregnant woman

Make sure the CHW understands that the question concerns a pregnant woman with a so far normal pregnancy, without problems. Anything mentioned by the CHW should be marked. If the CHW mentions something that is not listed, “Others” should be marked. If the only answer is “I don’t know,” “Don’t know” should be marked. You may have to mark all listed

¹ Random selection using the =randbetween() function in Excel

Question 4: what advice does the CHW give to a woman who asks what to do when she forgets one pill?

Make sure the CHW knows what contraceptive pills are. Make sure the CHW understands the question is about a woman who wants to know what to do when she forgets one (1) pill only. Mark all the answers the CHW gives, more than one if necessary. If anything is mentioned that is not on the list, mark “other”. If CHW claims not to know, mark “don’t know”

Question 5: For what diseases will the CHW give cotrimoxazole to children?

Make sure the CHW knows what cotrimoxazole is. Then make sure the CHW understands that the question pertains to children (under five years old). If necessary specify that the child is 3 years old. Mark all that are mentioned by the CHW. If the CHW mentions something that is not listed, “Others” should be marked. If the only answer is “I don’t know”, “Don’t know should be marked.

Question 4: how many tablets a day of chloroquine and for how many days will the CHW give to a child of 2 years old that is suspected to have malaria

Make sure the CHW understands that the child is 2 years old and that that suspected disease is malaria. If necessary, specifically remind the CHW to tell you how many tablets a day and for how many days. Mark only the first answer given by the CHW. If the CHW mentions something that is not listed, “Others” should be marked. If the only answer is “I don’t know”, “Don’t know should be marked.

3. Key to the answers

The sheet containing the key to the answers can be used to discuss the responses, but only after the whole interview is completed. It is not necessary to correct the CHW if you feel uncomfortable doing so.

Key to the CHW Knowledge questions for monitors

1. How do you explain to the mother how to prepare ORS? How do you explain to the mother how to prepare the solution from a packet of ORS powder? *(Mark all the CHW mentions)*

- a. **Mix one packet with one liter of clean water**
- b. **Mix one packet with 4 glasses of clean water**

Either one of these answers is correct

2. What do you tell the mother to explain how much fluid to give to a 1.5 year old with diarrhea without dehydration? *(Mark only one)*

- d. **Give ½ cup after every watery stool**
- e. **Give 1 cup after every watery stool**

Either one of these answers is correct

3. What advice do you give to any woman who is pregnant without any problems? *(Mark all the CHW mentions)*

- a. **Eat enough good foods**
- b. **Take extra iron and folic acid**
- c. **Take extra vitamins**
- d. **Use iodized salt**
- e. **Sleep and rest when you can**
- f. **Take some physical exercise, walk around regularly**
- g. **Keep clean**
- h. **Avoid traditional and modern medicines, except when prescribed**
- i. **Go to antenatal visit by a midwife or MD**
- j. **Get tetanus injection**
- k. **Avoid tobacco, opium, and other drugs**

All should be mentioned.

4. Do you distribute contraceptive tablets? IF YES: A woman asks you what to do if she forgets one (1) pill. What do you tell this woman to do? *(Mark all the CHW mentions)*

- a. **Take the pill immediately when she remembers**
- b. **Take the next pill at the usual time**
- c. **Use condoms or abstain from intercourse until 7 pills have been taken consecutively**

All of the above answers should be mentioned.

5. For what diseases do you give cotrimoxazole to children? For which diseases will you give cotrimoxazole tablets to a child? For what purpose do you use cotrimoxazole? When do you give cotrimoxazole to sick children? *(Mark all the CHW mentions)*

- d. **Pneumonia**
- f. **Diarrhea with blood**
- g. **Skin infections**
- h. **Fast breathing**

All of these answers are correct.

6. If a child of 2 years has malaria/fever, how many tablets a day of chloroquine will you tell the mother to give and for how many days? (*Mark only one*)

e. 1 per day for 2 days, and $\frac{1}{2}$ the third day

This is the only correct answer.

Annex 2 – Results by health worker type and gender

Results of CHW Knowledge Survey Dec 05 - Jun 06
CHW: N=292, Females= 155, Males= 137 - Nurses and MDs: N=52, Females= 14, Males = 38

Q1:How do you explain the mother to prepare a packet of ORS powder?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentioned at least one correct instruction	153	98.7	136	99.3	289	99.0	13	92.9	37	97.4	50	96.2
Mentioned at least one wrong instruction	51	32.9	49	35.8	100	34.2	6	42.9	11	28.9	17	32.7
Mentioned only correct instructions	102	65.8	87	63.5	189	64.7	7	50.0	27	71.1	34	65.4
Mentioned only incorrect instructions	0	0.0	0	0.0	0	0.0	0	0.0	1	2.6	1	1.9
Did not Answer	2	1.3	1	0.7	3	1.0	1	7.1	0	0.0	1	1.9

Q2: What do you tell the mother to give to a 1.5 year old with watery diarrhea without dehydration?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentioned at least one correct instruction	59	38.1	62	45.3	121	41.4	7	50.0	25	65.8	32	61.5
Mentioned at least one wrong instruction	96	61.9	73	53.3	169	57.9	9	64.3	16	42.1	25	48.1
Mentioned only correct instructions	52	33.5	58	42.3	110	37.7	4	28.6	21	55.3	25	48.1
Mentioned only incorrect instructions	89	57.4	69	50.4	158	54.1	6	42.9	12	31.6	18	34.6
Don't Know	5	3.2	7	5.1	12	4.1	1	7.1	1	2.6	2	3.8
Did not answer	2	1.3	0	0.0	2	0.7	0	0.0	0	0.0	0	0.0

Q3: What advice do you give to a woman who is pregnant without any problems?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentioned all 11 instructions	1	0.6	0	0.0	1	0.3	0	0.0	2	5.3	2	3.8
Average number of correct instructions mentioned	3.65		3.38		3.52		3.93		4.68		4.48	
Mentioned at least 1 correct instruction	151	97.4	137	100.0	288	98.6	13	92.9	38	100.0	51	98.1
Mentioned the need for ANC	52	33.5	50	36.5	102	34.9	5	35.7	23	60.5	28	53.8
Mentioned only correct instructions	121	78.1	113	82.5	234	80.1	12	85.7	36	94.7	48	92.3
Mentioned only incorrect instructions	3	1.9	0	0.0	3	1.0	0	0.0	0	0.0	0	0.0
Don't know	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Did not answer	1	0.6	0	0.0	1	0.3	1	7.1	0	0.0	1	1.9

Q4: A woman asks you what to do if she forgets 1 contraceptive pill: what do you tell this women to do?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentions all 3 necessary instructions	1	0.6	1	0.7	2	0.7	0	0.0	0	0.0	0	0.0
Average number of correct instructions mentioned	0.74		0.73		0.73		0.50		0.71		0.65	
Mentions at least one correct instruction	106	68.4	90	65.7	196	67.1	7	50.0	22	57.9	29	55.8
Mentions at least one wrong instruction	37	23.9	33	24.1	70	24.0	9	64.3	22	57.9	31	59.6
Mentioned only incorrect instructions	30	19.4	29	21.2	59	20.2	6	42.9	14	36.8	20	38.5
Don't Know	17	11.0	17	12.4	34	11.6	1	7.1	2	5.3	3	5.8
Did not answer	2	1.3	1	0.7	3	1.0	0	0.0	0	0.0	0	0.0

Q5: For what diseases do you give cotrimoxazole to sick children?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentioned all 4 correct conditions	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Average number of correct conditions mentioned	1.06		1.31		1.17		1.29		1.21		1.23	
Mentioned at least 1 correct condition	125	80.6	124	90.5	249	85.3	12	85.7	31	81.6	43	82.7
Mentioned at least 1 wrong condition	116	74.8	112	81.8	228	78.1	12	85.7	31	81.6	43	82.7
Mentioned only correct conditions	23	14.8	19	13.9	42	14.4	1	7.1	7	18.4	8	15.4
Mentioned only incorrect instructions	16	10.3	9	6.6	25	8.6	2	14.3	7	18.4	9	17.3
Don't know	3	1.9	0	0.0	3	1.0	0	0.0	0	0.0	0	0.0
Did not answer	11	7.1	4	2.9	15	5.1	0	0.0	0	0.0	0	0.0

Q6: How many tablets a day of choroquine do you give to a child of 2 years old with suspected malaria?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Mentioned right protocol	26	16.8	35	25.5	61	20.9	9	64.3	17	44.7	26	50.0
Mentioned wrong protocol	80	51.6	61	44.5	141	48.3	5	35.7	22	57.9	27	51.9
Mentioned only right protocol	26	16.8	35	25.5	61	20.9	8	57.1	16	42.1	24	46.2
Mentioned only wrong protocol	80	51.6	61	44.5	141	48.3	4	28.6	21	55.3	25	48.1
Don't know	35	22.6	31	22.6	66	22.6	1	7.1	0	0.0	1	1.9
Did not answer	14	9.0	11	8.0	25	8.6	0	0.0	0	0.0	0	0.0

Annex 3 – Detailed answers by health worker type and gender

Results of CHW Knowledge Survey Dec 05 - Jun 06

CHW: N=292, Females= 155, Males= 137 - Nurses and MDs: N=52, Females= 14, Males = 38

The "right" answers are shaded

Q1: How do you explain the mother to prepare a packet of ORS powder?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Mix one packet with one liter of clean water	35	22.6	38	27.7	73	25.0	4	28.6	8	21.1	12	23.1
b. Mix one packet with 4 glasses of clean water	122	78.7	105	76.6	227	77.7	11	78.6	33	86.8	44	84.6
c. Use clean drinking water	15	9.7	13	9.5	28	9.6	1	7.1	3	7.9	4	7.7
d. Use clean water	2	1.3	1	0.7	3	1.0	1	7.1	0	0.0	1	1.9
e. Mix one packet with one liter of light green tea	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
f. Mix one packet with 4 glasses of light green tea	3	1.9	2	1.5	5	1.7	1	7.1	1	2.6	2	3.8
g. Use freshly made light green tea	1	0.6	0	0.0	1	0.3	1	7.1	0	0.0	1	1.9
h. Use light green tea	0	0.0	1	0.7	1	0.3	0	0.0	0	0.0	0	0.0
i. None of the above	35	22.6	38	27.7	73	25.0	4	28.6	8	21.1	12	23.1

Q2: What do you tell the mother to give to a 1.5 year old with watery diarrhea without dehydration?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Give one liter a day	26	16.8	17	12.4	43	14.7	5	35.7	5	13.2	10	19.2
b. Give one spoonful every 5 or 10 minutes	15	9.7	16	11.7	31	10.6	3	21.4	4	10.5	7	13.5
c. Give half cup every 30 minutes	27	17.4	21	15.3	48	16.4	0	0.0	4	10.5	4	7.7
d. Give half cup after every watery stool	44	28.4	53	38.7	97	33.2	4	28.6	21	55.3	25	48.1
e. Give 1 cup after every watery stool	17	11.0	10	7.3	27	9.2	3	21.4	4	10.5	7	13.5
f. Give a bottle a day	5	3.2	3	2.2	8	2.7	0	0.0	1	2.6	1	1.9
g. Other	28	18.1	18	13.1	46	15.8	2	14.3	4	10.5	6	11.5
h. Don't know	5	3.2	7	5.1	12	4.1	1	7.1	1	2.6	2	3.8

Q3: What advice do you give to a woman who is pregnant without any problems?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Eat enough good foods	138	89.0	123	89.8	261	89.4	12	85.7	33	86.8	45	86.5
b. Take extra iron and folic acid	52	33.5	40	29.2	92	31.5	6	42.9	17	44.7	23	44.2
c. Take extra vitamins	32	20.6	20	14.6	52	17.8	6	42.9	12	31.6	18	34.6
d. Use iodized salt	28	18.1	15	10.9	43	14.7	3	21.4	14	36.8	17	32.7
e. Sleep and rest when you can	81	52.3	83	60.6	164	56.2	5	35.7	17	44.7	22	42.3
f. Take some physical exercise, walk around regularly	20	12.9	20	14.6	40	13.7	3	21.4	15	39.5	18	34.6
g. Keep clean	51	32.9	27	19.7	78	26.7	4	28.6	10	26.3	14	26.9
h. Avoid traditional and modern medicines, except when prescribed	16	10.3	15	10.9	31	10.6	2	14.3	9	23.7	11	21.2
i. Go to antenatal visit by a midwife or MD	52	33.5	50	36.5	102	34.9	5	35.7	23	60.5	28	53.8
j. Get tetanus injection	83	53.5	66	48.2	149	51.0	8	57.1	21	55.3	29	55.8
k. Avoid tobacco, opium and other drugs	12	7.7	4	2.9	16	5.5	1	7.1	7	18.4	8	15.4
l. Others	33	21.3	24	17.5	57	19.5	1	7.1	2	5.3	3	5.8
m. Don't know	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Q4: A woman asks you what to do if she forgets 1 contraceptive pill: what do you tell this women to do?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Take the pill immediately when she remembers	82	52.9	69	50.4	151	51.7	5	35.7	16	42.1	21	40.4
b. Take the next pill at the usual time	25	16.1	23	16.8	48	16.4	1	7.1	3	7.9	4	7.7
c. Use condoms or abstain from intercourse until 7 pills have been taken consecutively	7	4.5	8	5.8	15	5.1	1	7.1	8	21.1	9	17.3
d. Skip the forgotten pill and continue the other pills	6	3.9	10	7.3	16	5.5	5	35.7	12	31.6	17	32.7
e. Each day of forgotten a pill increase risk of pregnancy	2	1.3	2	1.5	4	1.4	1	7.1	2	5.3	3	5.8
f. Other	29	18.7	22	16.1	51	17.5	3	21.4	8	21.1	11	21.2
g. Don't know	17	11.0	17	12.4	34	11.6	1	7.1	2	5.3	3	5.8

Q5: For what diseases do you give cotrimoxazole to sick children?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Respiratory infection	46	29.7	42	30.7	88	30.1	8	57.1	23	60.5	31	59.6
b. Cough	76	49.0	77	56.2	153	52.4	5	35.7	13	34.2	18	34.6
c. Headache	40	25.8	19	13.9	59	20.2	2	14.3	1	2.6	3	5.8
d. Pneumonia	117	75.5	108	78.8	225	77.1	10	71.4	23	60.5	33	63.5
e. Diarrhea	59	38.1	52	38.0	111	38.0	5	35.7	13	34.2	18	34.6
f. Diarrhea with blood	18	11.6	30	21.9	48	16.4	6	42.9	13	34.2	19	36.5
g. Skin infections	29	18.7	38	27.7	67	22.9	1	7.1	5	13.2	6	11.5
h. Fast breathing	0	0.0	3	2.2	3	1.0	1	7.1	5	13.2	6	11.5
i. Others	16	10.3	11	8.0	27	9.2	2	14.3	3	7.9	5	9.6
j. Never	0	0.0	1	0.7	1	0.3	0	0.0	0	0.0	0	0.0
k. Don't know	3	1.9	0	0.0	3	1.0	0	0.0	0	0.0	0	0.0

Q6: How many tablets a day of chloroquine do you give to a child of 2 years old with suspected malaria?

	Community Health Workers						Nurses and MDs					
	Female		Male		Total		Female		Male		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
a. 1 per day for 2 days	11	7.1	14	10.2	25	8.6	0	0.0	2	5.3	2	3.8
b. 2 per day for 2 days	10	6.5	2	1.5	12	4.1	0	0.0	3	7.9	3	5.8
c. 1 per day for 3 days	17	11.0	19	13.9	36	12.3	0	0.0	3	7.9	3	5.8
d. 2 per day for 3 days	11	7.1	1	0.7	12	4.1	1	7.1	1	2.6	2	3.8
e. 1 per day for 2 days and half the third day	26	16.8	35	25.5	61	20.9	9	64.3	17	44.7	26	50.0
f. 2 per day for 2 days and 1 the third day	9	5.8	15	10.9	24	8.2	3	21.4	6	15.8	9	17.3
g. Other	23	14.8	12	8.8	35	12.0	1	7.1	7	18.4	8	15.4
h. Don't know	35	22.6	31	22.6	66	22.6	1	7.1	0	0.0	1	1.9